



## High-Dose Cyclophosphamide (Cytosan®)

*At the Clinical Center referred to as high dose Cytosan® (sy-TOX-en).*

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**How Given:** Intravenously (by vein).

**Drug Action:** Cytosan® prevents cancer cells from growing by binding together or breaking apart the building blocks that form DNA. DNA is the genetic material in cells used to make new cells. Cytosan® is also used to boost the number of blood stem cells needed for bone marrow and stem cell transplants.

**Side Effects:**

1. Bone marrow effects can include a temporary decrease in white blood cells, platelets, and red blood cells. These effects usually occur within 7 to 10 days after treatment.
2. Bladder irritation can occur. Symptoms can include blood in your urine or pain, burning, and difficulty when urinating.
3. Nausea and vomiting can occur within several hours after treatment and last for more than 1 day.
4. Nasal stuffiness or burning, watery eyes, and sneezing can occur during or immediately following treatment.
5. Lip, mouth, and throat sores can occur.
6. Temporary hair thinning or hair loss can begin within 2 weeks after treatment.
7. High-dose Cytosan® can damage your heart muscle. Tests may be done to monitor this effect.

**Special  
Instructions:**

1. Drink 8 to 10 glasses of fluid a day beginning 1 day before and continuing for 3 days after receiving Cytosan®.
2. You may receive a drug called mesna (mez-na) to help prevent bladder irritation. Mesna can be given by vein or by mouth. Mesna is not a chemotherapy drug, but it can cause mild nausea.
3. Empty your bladder frequently, at least every 2 hours while awake and every 4 hours during the night for 2 days after receiving Cytosan®.
4. Take antinausea medications on schedule as directed even if you are not having nausea.
5. Do not take any prescription or over-the-counter medications without talking to your NIH doctor. These include vitamins, herbal treatments, nose drops, cold, flu, headache, pain, hay fever, and allergy medications.
6. Call your NIH doctor or nurse if you
  - are unable to drink for more than 1 day or unable to eat for more than 2 days after treatment
  - have blood in your urine or pain, burning, and difficulty when urinating
  - have a temperature of 101.0 °F (38.3 °C) at any time, or have a temperature of at least 100.4 °F (38.0 °C) that lasts 1 hour or occurs two times within a 24-hour period
  - have any unusual bleeding or bruising
  - have shortness of breath, difficulty breathing, or ankle and hand swelling



This information is prepared specifically for patients participating in clinical research at the Warren Grant Magnuson Clinical Center at the National Institutes of Health and is not necessarily applicable to individuals who are patients elsewhere. If you have questions about the information presented here, talk to a member of your healthcare team.

Living with Cancer Chemotherapy Series  
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National Institutes of Health, CC Nursing Department

Questions about the Clinical Center? [OCCC@cc](mailto:OCCC@cc).